

Applicant: David Haase, *et al.*  
U.S.S.N.: 10/679,662  
Filing Date: October 6, 2003  
EMC Docket No.: EMC-03-100CIP2

**REMARKS**

The Office Action mailed April 13, 2006 has been carefully considered.

Reconsideration is respectfully requested in view of the amendments made to the claims and for the remarks made herein.

Claims 1-4, 8-11 and 15 are pending and stand rejected.

Claims 1, 8-11 and 15 have been amended.

Claims 1-2, 4, 8-9, 11 and 15 stand provisionally rejected under the Judicially created doctrine of double patenting over claims 1-2, 4, 8-9 and 15 of co-pending Application no. 10/679,662.

Applicant, through his attorney, thanks the Examiner for his observation regarding the claims in the two applications, but respectfully disagrees with the reason for rejecting the claims. However, in the interest of advancing the prosecution of this matter, applicant submits herewith a Terminal Disclaimer limiting the term of that patent that may issue based on the instant application to that date as expressed in the accompanying Terminal Disclaimer document.

Having filed a Terminal Disclaimer in this matter, applicant believes that the reason for the rejection has been overcome and respectfully requests that the Terminal Disclaimer be entered and the rejection be withdrawn.

Dependent claims 9-11 are objected to for the use of the language “the method of claim 8”.

Applicant thanks the Examiner for his observation and has amended the claim language to make the dependent claims 9-11 of the same type as the parent claim. More specifically, the

Applicant: David Haase, *et al.*  
U.S.S.N.: 10/679,662  
Filing Date: October 6, 2003  
EMC Docket No.: EMC-03-100CIP2

claims have been amended to recite “the system of claim 8” rather than “the method of claim 8”.

No new matter has been added.

Having amended the claims as suggested, applicant submits that the reason for the objection has been overcome and respectfully requests that the objection be withdrawn.

Claims 1-4, 8-11 and 15 stand rejected under 35 USC 102(e) as being anticipated by Young (USP no. 6,898,681), which is the same reason recited in rejecting the claims in the prior Office Action. The instant Office Action provides further rationale for rejecting the claims in reply to the applicant’s arguments made in response to the rejection of the claims in the prior Office Action on page 17. The instant Office Action states that “in column 11, lines 55-65 Young teaches: ‘if necessary or desired, to restore data in the master store 6 to the data stored at a particular point in time by overwriting the data in the master store . . . with the data from the appropriated shadow store where the corresponding bitmap indicates that the data in the corresponding block in the master store has changed since the required point [in] time copy was produced. (59) In this example, a user can request, via the user interface or network interface, recovery or restoration of a master copy from any of the available point in time copies. Once recovery has been requested then the point in time copy controller will access the shadow store and bitmap store storing the point in time copy data for the selected point in time copy and carry out the operations shown in Fig. 5a.’”

Applicant thanks the Examiner for providing further rationale for maintaining the rejection of the claims. However, Applicant must again respectfully disagree with and traverse the reason for the rejection, for the same reasons recited in applicant’s response to the rejection

Applicant: David Haase, *et al.*  
U.S.S.N.: 10/679,662  
Filing Date: October 6, 2003  
EMC Docket No.: EMC-03-100CIP2

of the claims in prior Office Action, which are repeated, as if in full, herein, and for the remarks made herein.

More specifically, claim 1, for example, recites a method for managing data content during a restoration of a data source comprising the steps of restoring the source by copying data from a clone and if preserving the data content of the clone is selected, then not allowing the data of the clone to be overwritten by host writes during the restoring step; and if preserving the data content is not selected, then overwriting the data contents of the clone during the restoring step.

Hence, the instant invention claims a method of restoring the source data from the clone data and further managing the clone data with respect to write requests that occur during the restore step.

Young discloses a system for providing a copy of data at a point in time having a data storage device including a master store arrange to store blocks of data, at least one subsidiary store to store point in time copy data having blocks of data copied from said master store at a particular point in time and a bit map store associated with each subsidiary store to store data indicating when a data block of the master store differs from a corresponding data block stored in the associated subsidiary store. (see Abstract). . Young discloses the restoration of a master store from a shadow store when new data is to be written into the master store. (see Figures 5b-5e and accompanying text in col. 6, line 53-col.7, line 23). Young further discloses the creation of a point in time copy of the master store in Figure 10 and col. 11, lines 8-30, which are referred to in the instant Office Action in rejecting the claims. With reference to col. 11, lines 8-30, Young discloses that “when . . . the point in time copy controller receives a request from a user to make a point in time copy then . . . the point in time copy controller [a] determines whether the user has

Applicant: David Haase, *et al.*  
U.S.S.N.: 10/679,662  
Filing Date: October 6, 2003  
EMC Docket No.: EMC-03-100CIP2

selected to overwrite the earliest point in time copy. If the answer ... is yes, then ... the point in time copy controller updates the existing point in time copy defined by the point in time copy data stored in the shadow store ... and the bit map store ... by overwriting any data blocks of the shadow store with the corresponding data blocks of the master store where the corresponding bit of the shadow bitmap is 1 indicating that the data has changed since the last point in time copy was produced ... If, however, the user has selected not to overwrite the earliest point in time copy then ... the point in time copy controller creates a fresh point in time copy using the shadow store and the bit map store in the manner described above with reference to Figs. 3 to 5e where the dependent mode is selected and in the manner described above with reference to Figs 6a to 8b where the independent mode is selected."

Hence, Young discloses a restoring master store from a shadow store and also discloses creation of the point in time copy with and without preservation of a previous point in time copy. However, Young fails to disclose that the creation of the point in time copy is performed during the restoring step as is recited in the claims. More specifically, Young discloses in Figure 10 with reference to Fig. 3 and Fig. 6, the creation of the point in time copy wherein old data from a master store is copies to a shadow store, a corresponding shadow bit is set and the old data in the master store is overwrite (see Fig. 3 or Fig. 6a, b and c). Young teaches the restoration process in Fig. 5a and provides not teaching of overwriting the data contents of the clone (shadow) during the restoring step, as is recited in the claims. For example, in the example provided in Fig. 5b-5e, Young teaches that during a restore step, with writes allowed, old data is written into the master store from the shadow store before new data is written into the master store.

Applicant: David Haase, *et al.*  
U.S.S.N.: 10/679,662  
Filing Date: October 6, 2003  
EMC Docket No.: EMC-03-100CIP2

However, Young is silent with regard to overwriting the data contents of the shadow during the restore step.

It is well recognized that to constitute a rejection pursuant to 35 USC §102, i.e., anticipation, all material elements recited in a claim must be found in one unit of prior art.

Young cannot be said to anticipate the present invention, because Young fails to disclose each and every element recited. More specifically, Young fails to disclose “overwriting the data contents of the clone during the restoring step. ” As Young fails to disclose overwriting the data contents of the clone (shadow) during the restoring step it would further follow that Young is silent with regard to determining the extents of the source affected and setting an indicator to indicate that the extents need to be re-copied.

At least for this reason, applicant submits that the rejection of claim 1 has been overcome and can no longer be sustained. Applicant respectfully requests withdrawal of the rejection and allowance of the claim.

With regard to the remaining independent claims, these claims recite subject matter similar to that recited in claim 1 and were rejected for the same reason used in rejecting claim 1. Thus, for the remarks made in response to the rejection of claim 1, which are also applicable in response to the rejection of the remaining independent claims, and reasserted, as if in full, herein, it is submitted that the reason for rejecting these claims has been overcome and the rejection can no longer be sustained. It is respectfully requested that the rejection be withdrawn and the claims allowed.

With regard the remaining claims these claims ultimately depend from the independent claims, which have been shown to contain subject matter not disclosed by, and, hence, allowable

Applicant: David Haase, *et al.*  
U.S.S.N.: 10/679,662  
Filing Date: October 6, 2003  
EMC Docket No.: EMC-03-100CIP2

over, the reference cited. Accordingly, these claims are also allowable by virtue of their dependency from an allowable base claim.

It is respectfully requested that the rejection be withdrawn and the claims allowed.

Although the instant Office Action has been made final, applicant respectfully requests that the amendments to the claims be entered. No new matter has been added. The amendments have been made to more clearly state the invention claimed.

In view of the foregoing, the applicant believes that the application is in condition for allowance and respectfully request favorable reconsideration.

In the event the Examiner deems personal contact desirable in the disposition of this case, the Examiner is invited to call the undersigned attorney at the telephone number indicated below.

No fees are believed needed for submission of the instant Amendment and Response. However, if any fees are need, please charge all fees occasioned by this submission to Deposit Account No. 05-0889.

Respectfully submitted,

Dated: 7/13/04



Carl A. Giordano, Esq. (Reg. No. 41,780)  
Attorney for Applicants  
EMC Corporation  
Office of General Counsel  
44 S. Broadway, 7<sup>th</sup> flr.  
White Plains, NY 10989  
(914) 798 8505

Please direct all communications to:  
EMC Corporation  
Office of General Counsel  
176 South Street  
Hopkinton, MA 01748